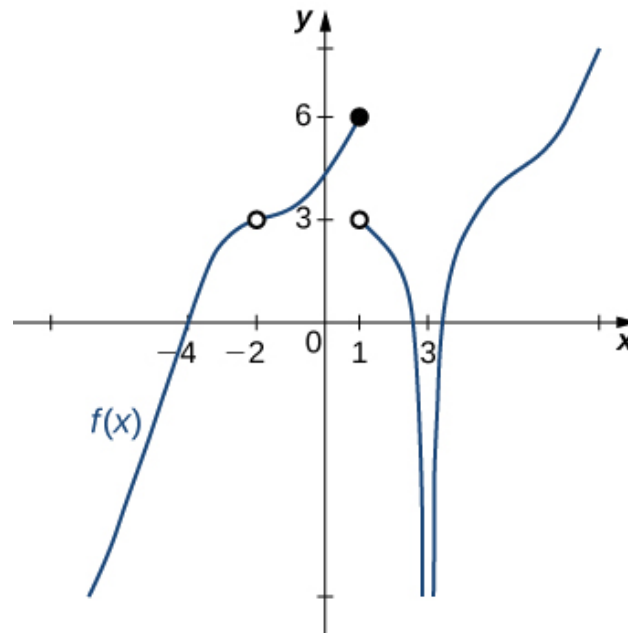


1. For the graph below, find the value(s) a that makes the statement true:
 $\lim_{x \rightarrow a} f(x)$ does not exist.



- A. 1
- B. -2
- C. 3
- D. Multiple a make the statement true.
- E. No a make the statement true.

-
2. Evaluate the limit below, if possible.

$$\lim_{x \rightarrow 7} \frac{\sqrt{7x - 33} - 4}{2x - 14}$$

- A. 0.062
- B. 1.323
- C. ∞
- D. 0.125
- E. None of the above

3. Evaluate the one-sided limit of the function $f(x)$ below, if possible.

$$\lim_{x \rightarrow -9^+} \frac{-2}{(x+9)^6} + 3$$

- A. ∞
 - B. $f(-9)$
 - C. $-\infty$
 - D. The limit does not exist
 - E. None of the above
-

4. To estimate the one-sided limit of the function below as x approaches 4 from the left, which of the following sets of numbers should you use?

$$\frac{\frac{4}{x} - 1}{x - 4}$$

- A. $\{4.0000, 4.1000, 4.0100, 4.0010\}$
 - B. $\{4.0000, 3.9000, 3.9900, 3.9990\}$
 - C. $\{3.9000, 3.9900, 3.9990, 3.9999\}$
 - D. $\{4.1000, 4.0100, 4.0010, 4.0001\}$
 - E. $\{3.9000, 3.9900, 4.0100, 4.1000\}$
-

5. Based on the information below, which of the following statements is always true?

As x approaches ∞ , $f(x)$ approaches 12.374.

- A. x is undefined when $f(x)$ is large enough.
- B. $f(x)$ is close to or exactly 12.374 when x is large enough.
- C. $f(x)$ is close to or exactly ∞ when x is large enough.
- D. $f(x)$ is undefined when x is large enough.

E. None of the above are always true.

6. Based on the information below, which of the following statements is always true?

$f(x)$ approaches 18.962 as x approaches ∞ .

- A. $f(x)$ is undefined when x is large enough.
 - B. $f(x)$ is close to or exactly ∞ when x is large enough.
 - C. $f(x)$ is close to or exactly 18.962 when x is large enough.
 - D. x is undefined when $f(x)$ is large enough.
 - E. None of the above are always true.
-

7. To estimate the one-sided limit of the function below as x approaches 1 from the left, which of the following sets of numbers should you use?

$$\frac{\frac{1}{x} - 1}{x - 1}$$

- A. $\{1.0000, 0.9000, 0.9900, 0.9990\}$
 - B. $\{1.0000, 1.1000, 1.0100, 1.0010\}$
 - C. $\{0.9000, 0.9900, 0.9990, 0.9999\}$
 - D. $\{1.1000, 1.0100, 1.0010, 1.0001\}$
 - E. $\{0.9000, 0.9900, 1.0100, 1.1000\}$
-

8. Evaluate the one-sided limit of the function $f(x)$ below, if possible.

$$\lim_{x \rightarrow 5^+} \frac{-3}{(x + 5)^7} + 2$$

- A. ∞
- B. $-\infty$
- C. $f(5)$

D. The limit does not exist

E. None of the above

9. Evaluate the limit below, if possible.

$$\lim_{x \rightarrow 5} \frac{\sqrt{9x - 29} - 4}{6x - 30}$$

A. ∞

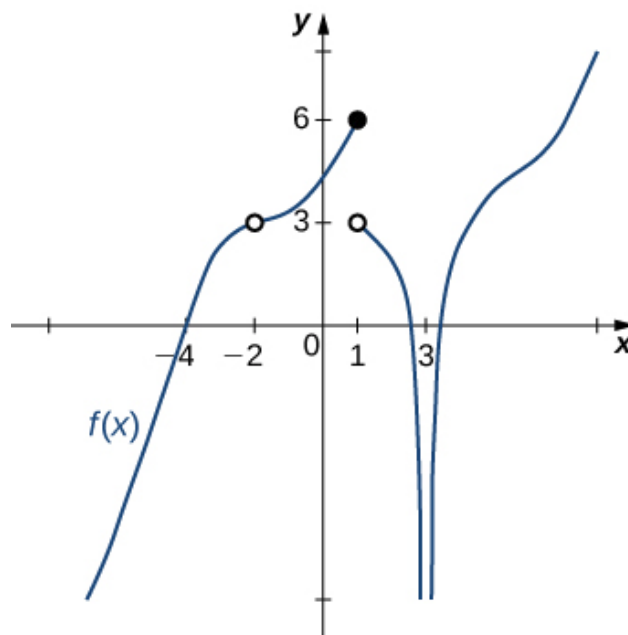
B. 0.125

C. 0.021

D. 0.500

E. None of the above

10. For the graph below, find the value(s) a that makes the statement true:
 $\lim_{x \rightarrow a} f(x) = 3$.



A. -2

B. $-\infty$

C. 1

D. Multiple a make the statement true.

E. No a make the statement true.
